

REMARKS

Claims 1-6 and 8-44 are pending in this application. Claims 1, 17 and 31 have been amended to recite a preparation in the form of a solution. Support for this amendment appears in the specification at page 3, paragraph [008], which states that the preparation may be in the form of a solution. Claims 1 and 17 have also been amended to clarify that the nonvolatile constituents in the pharmaceutical preparation of the claim comprise urea and a hydrophilic film-forming agent. Claims 1, 17 and 31 were also amended to recite film-forming agents identified in original claim 7, which has now been canceled.

I. Rejection under 35 U.S.C. § 102(b)

The Examiner rejected claims 1, 2, 4-6, 9, 10, 11, 15-18, 20-23, 26-28, 31, 33 and 41-43 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,346,692 to Wohlrab et al. Applicants traverse this rejection. In an effort to expedite prosecution, however, claims 1, 17 and 31 have been amended to recite certain film-formers present in original claim 7, which has now been canceled. Claim 7 was not included in this rejection. Since claims 1, 17 and 31 now incorporate the limitations of canceled claim 7, the rejection as it applies to those claims should be withdrawn.

The subject matter of amended claims 1, 17 and 31 also would not have been obvious in view of the Wohlrab patent, since the patent disclosure, including the examples cited by the Examiner at col. 3, lines 29-32, does not motivate one skilled in the art to choose any of the film formers listed in the amended claims.

Rejected claims 2, 4-6, 9, 10, 11 and 15-16 depend from claim 1 and should be patentable for at least the same reasons as claim 1. Claims 33 and 41-43 depend from claim 31 and should be patentable for at least that reason. The last remaining rejected claims 18, 20-23 and 26-28 depend from claim 17 and should be patentable for at least that reason as well.

II. Rejection under 35 U.S.C. § 103(a)

The Examiner rejected all claims under 35 U.S.C. § 103(a) as unpatentable over the disclosure of U.S. Patent No. 5,874,074 to Smith. In support of the rejection, the Examiner stated that Smith discloses a composition comprising polyvinylpyrrolidone, urea, water and anti-microbial agents, for application to skin to treat warts and other skin disorders. The

Examiner further stated that Smith specifically discloses salicylic acid and lactic acid as wart removing agents and that salicylic acid and urea are disclosed as keratolytic agents that appear to be equivalent in their activities.

Applicants traverse this rejection. First of all, the Smith disclosure appears only to relate to the treatment of skin disease or disorders. As a result, the disclosure does not suggest use on fingernails or toenails as recited in claims 25, 30, 33 and 34. Second, with reference to all pending claims, applicants have amended claims 1, 17 and 31 to recite a pharmaceutical preparation in the form of a solution. Those skilled in the art recognize that a "solution" in this context is a homogenous mixture of the ingredients of the preparation. See Grant & Hackh's Chemical Dictionary, 5th Ed., McGraw-Hill, Inc. at pages 541-542 (1987) (attached). Smith does not disclose such a preparation. Instead, the moisturizing lotion of Smith is composed of an oil-in-water emulsion. Smith at col. 1, lines 48-52, and col. 2, lines 11-14. Those skilled in the art recognize that an "emulsion" is a microscopically heterogeneous mixture of 2 normally immiscible liquid phases, in which one liquid forms minute droplets suspended in the other liquid. See Grant & Hackh's Chemical Dictionary at page 212. The specific and apparently deliberate disclosure of moisturizing lotions in Smith as oil-in-water emulsions does not motivate one skilled in the art to make and use a preparation in the form of a solution as now claimed. Applicants therefore respectfully request that the Examiner withdraw this rejection.

III. Double patenting rejection

The Examiner provisionally rejected claims 17-24 and 26-29 under the judicially-created doctrine of obviousness-type double patenting in view of claims 17-24 and 26-29 of co-pending application no. 10/156,070.

As explained in detail above, the art-based rejections of the pending claims should be withdrawn. The withdrawal of those rejections would leave this provisional rejection as the only rejection remaining in the application. Following MPEP § 804(I)(B), applicants ask that the Examiner withdraw the double patenting rejection in the first of these co-pending case that becomes allowable. This procedure would ultimately convert the "provisional double patenting rejection" in the remaining case into a "double patenting rejection," and would permit applicants to address the issue of double patenting in the remaining application.


In view of these amendments and remarks, applicants respectfully request reconsideration and reexamination of this application.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: 
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Reg. No. 43,911

GRANT & HACKH'S CHEMICAL DICTIONARY

[*American, International, European and British Usage*]

*Containing the Words Generally Used in Chemistry,
and Many of the Terms Used in the Related
Sciences of Physics, Medicine, Engineering,
Biology, Pharmacy, Astrophysics,
Agriculture, Mineralogy, etc.*

Based on Recent Scientific Literature

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4th ed., published by McGraw-Hill in 1969. It was prepared by Dr.
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Hackh. The current, or 5th, edition of this book was prepared by Dr.
Roger L. Grant, whose father prepared the 4th edition.

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- emission** The liberation of energy, especially as radiation.
e. spectrum See *emission spectrum* under *spectrum*.
- emmenagogue** A drug that produces or increases menstrual flow.
- emmer** A variety of wheat, formerly abundant in central Europe and the Near East.
- Emmerling tube** A cylinder filled with glass beads for the absorption of gases by liquids.
- emodin** $C_{15}H_{10}O_5$ = 270.2. 1,3,8-Trihydroxy-6-methylantraquinone*. A purgative principle in many *Rhamnus* species. Orange prisms, m. 260, sparingly soluble in water. *aloe* ~ 1,8-Dihydroxy-3-hydroxymethylantraquinone*. An isomer of emodin and constituent of aloes, cascara, senna, and frangula. Orange needles, m. 222.
- emollient** A drug applied externally to soothe skin, e.g., talcum.
- empiric(al)** Describing knowledge gained by experience, without theoretical considerations. Cf. *scientific*.
- empirical formula** See *empirical formula* under *formula*.
- empletite** $CuBiS_2$. Gray masses, d. 6.4, hardness 2.5.
- empyrean air** See *oxygen*.
- empyreumatic** Any odorous substance formed by the destructive distillation of vegetable or animal matter. *e. oils* Oily *e.*, e.g., creosote.
- emu, e.m.u.** Abbreviation for electromagnetic units.
- emulgator** Emulsifier.
- emulsification** Making an emulsion from 2 immiscible liquids by agitation, with addition of an emulsifier to prevent the droplets coalescing. *de* ~ The breaking up of an emulsion, e.g., by adding an excess of the dispersed phase, heating, freezing, or centrifuging.
- emulsifier** Emulsifying agent, emulgator. A substance which makes an emulsion more stable (as, ammonium linoleate), by reducing the surface tension or protecting the droplets with a film.
- emulsify** To make an emulsion.
- emulsifying wax** (1) NF: Cetostearyl alcohol and polysorbate mixture. (2) BP: Cetostearyl alcohol 90, sodium lauryl sulfate 10, and water 4 pts., heated at 115°C.
- emulsion** Emulsoid. A fluid consisting of a microscopically heterogeneous mixture of 2 normally immiscible liquid phases, in which one liquid forms minute droplets suspended in the other liquid. Cf. *colloid*, *emulsifier*, *Aerosol*. *invert* ~ Water in oil *e.*
- en-** (1) Greek prefix meaning "in," "on," or "at."
 (2)* Indicating ethylenediamine as a ligand.
- enamel** (1) A gloss paint. (2) A vitreous, opaque, or transparent glaze, fused over metal or pottery. *grayware* ~ A mixture of feldspar 50, borax 30% with anhydrous sodium carbonate, sodium nitrate, and cryolite. *jewelry* ~ A mixture of silica 14, boric acid 20, sodium nitrate 10, potassium nitrate 23%. *tooth* ~ The mainly inorganic covering of the crown of teeth. When mature, it is the hardest body tissue, being as hard as sapphire. *white cover* ~ A mixture of quartz 10-22, feldspar 18-33, borax 18-34, soda 3-10, sodium nitrate 2-5, cryolite 3-17%; colored with a metallic oxide, generally lead tetraoxide.
- enamic form** See *enimization*.
- enamine** A tautomeric form of Schiff's base.
- enanthal** A synthetic polymer (U.S.S.R. origin) made by the high-pressure polymerization of ethylene and certain amino acids.
- enanthaldehyde** Heptanal*.
- enanthic** *e. acid* Heptanoic acid*. *e. aldehyde* Heptanal*.
- e. ether* Ethyl hexyl ether*.
- enanthe** Heptyne*.
- enanthol** Heptanol*.
- enanthotoxin** $C_{17}H_{22}O_2$ = 258.4. (E,E,E)-2,8,10-Heptadecatriene-4,6-diyne-1,14-diol*. A poisonous resin from the rhizomes of *Oenanthe* (five-finger root); m. 87.
- enanthyl** The hexyl* radical, C_6H_{13} -.
- enanthylic acid** Heptanoic acid*.
- enantiomers*** Molecules that are mirror images of one another.
- enantiomorph** (1) A crystal which corresponds with another crystal as its mirror image. (2) The opposite optically active substance, e.g., the dextro and levo forms.
- enantiomorphous** Related as enantiomorphs.
- enantiotropic** Existing in 2 crystal forms, one stable above, the other below, the transition-point temperature.
- enantiotropy** The state of being enantiotropic.
- enargite** Cu_3AsS_4 . Gray, metallic rhombs, d. 4.3-4.5, hardness 3.
- encapsulation** The enclosure of a reactant in a minute protective capsule, which is broken in the presence of the other reactant; as, in coatings on carbonless copy papers.
- endo-** Prefix indicating a "bridge" linkage joining 2 nonadjacent atoms in a ring of an organic molecule.
- endocrine** Pertaining to the secretions of ductless glands. See *ductless glands*, *hormone*.
- endogenous** Generated or originating within. *e. purines* The purine waste products of metabolism in excretions. Cf. *exogenous*.
- endomorph** A mineral enclosed within another (the perimorph).
- endoscope** A device to render internal organs or surfaces visible. Cf. *fiber optic*.
- endosmosis** The diffusion of a liquid through an organic membrane. Cf. *exosmosis*.
- endosulfan*** See *insecticides*, Table 45 on p. 305.
- endothermic** Absorbing heat. Antonym: exothermic. *e. compound* A compound absorbing heat during formation, and liberating heat on decomposition. *e. reaction* A slow chemical change which absorbs a definite number of joules; the stable exothermic compounds are transformed into unstable *e. compounds*.
- endotoxin** (1) Generally, any of the bacterial poisons set free by autolysis after cell death. (2) The O antigen from gram-negative bacteria.
- endoxerosis** The internal decline of a plant.
- endoxy-** Prefix indicating oxygen in a ring. Cf. *oxa*(2).
- end point** (1) The stage in titration when the reaction is complete. (2) The point of balance between 2 forces.
- ene*** Suffix indicating a double bond; as, hexene. Cf. *diene*, *-idene*.
- enema** A liquid preparation for rectal injection; either a water and soap solution to cause evacuation, or a drug, as prednisolone, for inflammation.
- energetics** (1) The study of forces at work. (2) A philosophy which denies the existence of passive inert matter and conceives the universe as arrangements of energies in space.
- e(ne)rgon** See *quantum*.
- energy** Capacity to do work; e.g., heat, light, electricity, chemical action, or mechanical energy. The work done by the force which produces a change in the velocity of a body or a change in its shape and configuration, or both. It can be defined by $force \times distance$, or $one-half mass \times square of velocity$. *alternative* ~ Types of energy other than those from fossil fuels; as, solar, biomass, wind, wave, tide, geothermal, and hydrogen. *atomic* ~ See *atomic energy*. *available* ~ Free *e.* *chemical* ~ *E.* involved in chemical changes. See *thermodynamics*. *conservation of* ~ *E.* may be transformed from one form to another, but cannot be

solution Liquefaction of a gel; the reverse of gelation.

solbrol Nipagin M.

solder Braze. A fusing metal or alloy used to unite adjacent surfaces of less fusible metals. **brass** ~ Copper s. **copper** ~ An alloy: Sn 5, Pb 2 pts., with zinc chloride as flux. **fine** ~ Soft s. **fusible** ~ An alloy of Pb, Sn, and Bi, which melts in water; used in spray fire extinguishers. **gold** ~ An alloy: Au 10, Ag 6, Cu 4 pts. **hard** ~ A high-melting-point alloy used as s.; it fuses at red heat: e.g., Cu + Zn + Ag.

lead ~ An alloy of equal parts of Pb and Sn, used for soldering lead. **plumber's** ~ An alloy usually containing approx. Pb 65, Sn 30%, with some Sb. **seifert** ~ A s. for aluminum, containing Sn 73, Zn 21, Pb 5%. **silver** ~ See **silver solder**. **soft** ~ A s. that fuses below red heat; as, Sn + Pb; **lead s.** (above), **fusible s.** **zinc** ~ An alloy: Sn 5, Pb 3 pts.

soldering (1) Uniting metallic pieces by heat with or without an alloy (solder) and flux (borax). (2) In commerce, soft (as distinct from hard) solders. S. differs from **brazing** and **fusion welding**, q.v. **autogenous** ~ Uniting metal surfaces by interdiffusion, without a more fusible alloy. **fusing** ~ Uniting metal surfaces by filling all intervening space with a completely fused solder. **sweating** ~ S. in which the solder is heated near its melting point and adheres.

solenhofen stone A fine-grained, porous limestone; contains clay.

solenoid A hollow cylinder, wound with resistance wire; used to produce fields of electric force, as to operate a valve.

solfatara A volcanic vent from which sulfur is obtained.

solferino Fuchsin.

solid (1) A substance of definite shape, and relatively great density, low internal enthalpy, and great cohesion of its molecules. It may be homogeneous (as crystals and solid solutions) or heterogeneous (as amorphous and colloidal substances). **s. solution** (1) **Sosoloid**. A homogeneous, s. mixture of substance; as, glass. (2) A s. solution of a solid, liquid, or gas in a solid. **s. state** Describing electronic components that utilize electronic and magnetic properties of solids.

solidago Goldenrod. The dried herb of *Solidago odora* (Compositae); a carminative.

solidify To change into the solid state.

solidifying point Freezing point.

solidus In a temperature-concentration diagram for both solid and liquid solutions whose concentrations differ, the s. curve relates to the solid phase, and the **liquidus** to the liquid phase.

soliquoid Suspension. A dispersed system of a solid phase in a liquid phase.

soln. Abbreviation for solution.

solodization Dealkalization. Removal of alkali from soils by degradation.

Solozone Trademark for a brand of hydrogen peroxide.

solubility The extent to which a substance (solute) mixes with a liquid (solvent) to produce a homogeneous system (solution). The classification used by the United States Pharmacopeia is shown in Table 85. **apparent** ~ The total amount of undissociated and dissociated portions of a substance dissolved in a liquid. **degree of** ~ The concentration of a saturated solution at a given temperature. S. generally increases with increase in temperature. **molar** ~ c/M , where c is the g/L and M the molecular weight. **real** ~ The amount of undissociated solute in a liquid. **s. curve** A graph obtained by plotting the amount of dissolved substance in a saturated solution against the

TABLE 85. USP SOLUBILITY CLASSIFICATION

Description	Parts of solvent required for 1 part of solute
Very soluble	Less than 1
Freely soluble	1-10
Soluble	10-30
Sparingly soluble	30-100
Slightly soluble	100-1,000
Very slightly soluble	1,000-10,000
Practically insoluble or insoluble	10,000+

temperature. **s. exponent** p or $p_s = \log 1/S$. Cf. **pH**. **s. product** $S = [M^+] \times [X^-]/[MX]$, where the brackets indicate the concentrations of the components of the dissociation equilibrium: $MX = M^+ + X^-$. If $[M^+] \times [X^-]$ exceeds S , MX will precipitate; and vice versa. E.g., NaCl is precipitated from concentrated solutions by HCl gas.

soluble Capable of mixing with a liquid (dissolving) to form a homogeneous mixture (solution). Cf. **solubility**, **solution**. **s. barbital** Sodium *barbital*. **s. cotton** Nitrocellulose. **s. glass** Sodium silicate. **s. mercury** $NH_2Hg_2NO_3 = 479.2$. **Hahnemann's mercury**. Black precipitate on adding ammonia to mercurous nitrate. **s. starch** See **starch soluble**. **s. tartar** Ammonium potassium tartrate*. **s. tartrate** Potassium tartrate.

solum A damp-resisting layer of material installed on the ground under a floor, e.g., bitumen.

solute A substance that mixes with or dissolves in a solvent to produce a solution.

solution (1) Dissolution. The mixing of a solid, liquid, or gaseous substance (solute) with a liquid (the solvent), forming a homogeneous mixture from which the dissolved substance can be recovered by physical processes. (2) The homogeneous mixture formed by the operation of s. **anisotonic** ~ Any nonisotonic s.; as, a hypotonic or hypertonic s. **aqueous** ~ A s. in which water is the main solvent. **buffer** ~ A s. of acid or basic salts that can neutralize either acids or bases without appreciable change in hydrogen-ion concentration. **centinormal** ~ A s. containing 0.01 equivalents per liter. **chemical** ~ A s. in which solute and solvent react to form a compound that dissolves in the solvent and cannot be recovered by distillation. Cf. **physical solution**. **colloidal** ~ A macroscopically homogeneous, microscopically heterogeneous, system of minute particles (colloid, dispersed phase) suspended in a liquid (continuous phase, medium). Cf. **colloid**. **concentrated** ~ A s. in which the solute content is relatively great. **decinormal** ~ A s. that contains 0.1 equivalents per liter. **dilute** ~ A s. in which the solute is relatively small in quantity. **gram molecular** ~ Molar s. **heat of** ~ See **heat of solution**. **hypertonic** ~ A s. whose osmotic pressure is greater than that of blood serum. **hypotonic** ~ A s. whose osmotic pressure is less than that of blood serum. **ionic** ~ A s. whose ions of the solute are surrounded by oriented molecules of the solvent. **isotonic** ~ A s. having an osmotic pressure equal to that of blood serum; as, 0.9% w/v sodium chloride s. **molar** ~ A s. containing 1 g molecule (mole) of substance per 1,000 g of s. **molar** ~ A s. containing 1 g molecule of substance per liter. Cf. **normal solution**. **molecular** ~ A true s. in which the molecules of solute are surrounded by molecules of solvent. Cf. **colloidal solution**, **ionic solution**. **normal** ~ A s. containing 1 gram equivalent per liter. **normal salt** ~ A s. containing 1 mole sodium chloride per liter. Cf. **isotonic**.

solution. **physical** ~ A s. in which solute and solvent mix but do not react chemically; the solute can be recovered on evaporation, the solvent by distillation. Cf. *chemical solution*. **physiological** ~ Isotonic s. **saturated** ~ A s. that normally contains the maximum amount of substance able to be dissolved. **solid** ~ See *solid solution, sosoloid*. **standard** ~ A s. that contains a definite amount of substance dissolved; as, a molar s. **standardized** ~ A s. adjusted to a known concentration. **supersaturated** ~ A s. that contains a greater quantity of solid than can normally be dissolved at a given temperature; on slow cooling, the excess precipitates under suitable conditions. **test** ~ T.S. A reagent s. **volumetric** ~ V.S. A standard analytical s., usually containing 1, $\frac{1}{2}$, or $\frac{1}{10}$ mole of a substance dissolved in 1 liter of water.

s. mining Winning soluble salts (as potassium chloride) by pumping water into the formation and evaporating the resulting solution. E.g., Frasch process. **s. pressure** The tendency of atoms or molecules to mix with a liquid, or to dissolve in it; measured by the osmotic pressure. **s. tension** The tendency of atoms or molecules to dissolve in a liquid and form ions; measured by the electromotive force. See *Nernst theory*. **s. theory** See *Nernst theory, Arrhenius theory*. **solvate** A molecular or ionic complex of molecules or ions of solvent with those of solute; as $\text{Cl}(\text{H}_2\text{O})_n^-$. The ions are surrounded by a zone of oriented water molecules. **crystalline** ~ A crystal containing solvent as part of its lattice. **s. theory** The abnormalities of solutions are due to the formation of complexes between the ions or molecules of the solute and solvent. Cf. *hydration*.

solvation Any stabilizing interaction between solute and solvent; if the latter is water, hydrates or hydrated ions are formed, e.g., $\text{M}(\text{H}_2\text{O})_n$.

solvatochromism The formation, by molecular addition, of a colored complex (solvate) between colorless molecules of organic compounds and those of other compounds.

Solvay S., Ernst (1838-1922) Belgian industrial chemist. **S. process** Making sodium carbonate and calcium chloride by treating sodium chloride with ammonia and carbon dioxide. The sodium hydrogencarbonate produced is heated and some carbon dioxide recovered; the ammonia is recovered by lime or magnesia.

solvent (1) That component of a homogeneous mixture which is excess. (2) A liquid which dissolves another substance (solute), generally a solid, without any change in chemical composition; as, water containing sugar. (3) A liquid that dissolves a substance by chemical reaction; as, acids and metals. **acid** ~ A s. that acts as an acid by losing a proton to the solute. **aqueous** ~ Water. **associating** ~ A s. whose molecules form complexes; as, water. Cf. *bond*. **basic** ~ A s. that acts as a base by gaining a proton from the solute. **chemical** ~ See (3). **ionizing** ~ See *polar solvent*. **lacquer** ~ Organic liquids used to dissolve resins and nitrocellulose: low-boiling ~ b. below 100 (alcohol). **medium-boiling** ~ b. near 125 (toluene). **high-boiling** ~ b. 150-200 (xylene). **plasticizer and softener** ~ b. near 300 (camphor). **molten** ~ Flux. **nonaqueous** ~ A solvent other than water. **nonassociating** ~ A s. that does not form complexes between its molecules or ions and the solute; as, benzene. **nonionizing** ~ Nonpolar. **nonpolar** ~ A s. that does not conduct an electric current; as, hydrocarbons. **normal** ~ Nonassociating. **physical** ~ A s. that does not react chemically with the solute. **polar** ~ A s. that produces electrically conducting solutions (as, water), and causes dissociation of the solute into ions. **two-type** ~ A s.

having 2 groups which confer s. properties; as alcohol-ethers, $\text{HO}\cdot\text{R}\cdot\text{O}\cdot\text{R}$; e.g., Cellosolve. **universal** ~ Aqua regia.

s. action A process of making substances water-soluble.

solvolysis The effect of the nucleophilic character of a solvent on the reactions of the solute dissolved in it.

solvolytic Pertaining to solvation. **s. dissociation** Ion formation in a nonaqueous solution. Cf. *solvate theory*.

somatic Pertaining to the body; usually to cells other than gametogenic and gemete cells. S. cells have the diploid number of chromosomes.

sombrerite A "hard" mineral phosphate (35% phosphorus pentoxide); a source of phosphorus.

Sommelet reaction The production of benzaldehyde by reaction between benzylamine and formaldehyde, preferably in presence of hexamine.

Sommerfeld S., Arnold (1868-1951) German physicist; developed quantum theory of atomic structure. **S. notation** See *quantum number*.

somnifacient A *hypnotic*, q.v.

somnirol $\text{C}_{32}\text{H}_{44}\text{O}_7$ = 540.7. A monohydric alcohol of *Withania* species (Solanaceae).

Somnitol $\text{C}_{33}\text{H}_{46}\text{O}_7$ = 554.7. Trademark for an alcohol from *Withania* species (Solanaceae).

Somophyllin Trademark for aminophylline.

Soneryl Trademark for butobarbital.

sonic Phonic. Pertaining to sound which is audible to the human ear. See *sound frequency*. Cf. *infrasonic, ultrasonic*.

Sonnenschein S., Franz Leopold (1819-1879) German forensic analyst. **S.'s reagent** A solution of phosphomolybdic acid forms a yellow precipitate with the sulfates of alkaloids.

sonochemistry The use of high-intensity ultrasound radiation to induce chemical reactions. Acoustic cavitation causes localized areas of high temperature and pressure.

sonoluminescence Luminescence induced by sound waves.

sonometer Phonometer. An instrument to measure sound vibrations.

sonora gum The exudations of the creosote bush, *Covillea tridentata* (Mexico).

soot An impure black carbon containing oily and empyreumatic compounds from the incomplete combustion of resinous materials or wood. It contains hydrocarbons, and if derived from coal, ammonium sulfate. Cf. *lampblack*.

sophora Coral bean. The poisonous seeds of *Sophora* species (Leguminosae), India.

sophorine An alkaloid from *Sophora* species. Colorless liquid resembling cystine and matrine. Cf. *kuhseng*.

soporific An agent that produces sleep. Cf. *hypnotic*.

sorbic acid (E,E)-2,4-Hexadienoic acid*. **hydro** ~ Hexenoic acid*. **para** ~ A lactonelike compound forming sorbic acid when heated with acid or alkali.

sorbide Sorbitan with one further water molecule removed. Any of a group of surfactants, used as emulsifiers.

sorbin, **sorbinose** Sorbose.

sorbitan $\text{C}_6\text{H}_{12}\text{O}_5$ = 164.1. Sorbitol anhydride. Generic name for anhydrides of sorbitol; derived by removal of 1 molecule of water. With fatty acids, as oleic and stearic, sorbitans form nonionic surface-active agents that are used as emulsifiers. Cf. *sorbide*.

sorbite (1) Sorbitol. (2) A mixture of ferrite and cementite, with conglomerations of carbon in steel; a transition form between pearlite and troostite.

sorbitol $\text{HO}\cdot\text{H}_2\text{C}(\text{CHOH})_4\text{CH}_2\text{OH}$ = 182.2. Glucitol†, **sorbite**. **D** ~ Occurs in many plants. Colorless crystals, m. 111, soluble in water. Used chiefly for the preparation of

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